November 29, 1989

Docket No. 50-410

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Mr. Lawrence Burkhardt III
Executive Vice President, Nuclear Operations
Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Dear Mr. Burkhardt:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 71824)

The Commission has issued the enclosed Amendment No. 11 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station Unit No. 2 (NMP-2). The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated December 15, 1988.

This amendment revises the Technical Specifications to increase the test interval for the performance of Channel Functional Tests on the Reactor Protection System Electrical Protection Assemblies. By this revision, a Channel Functional Test will be performed each time the plant is in cold shutdown for a period of more than 24 hours, unless it has been performed within the previous 6 months.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

Original signed by

Robert E. Martin, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 11 to NPF-69
2. Safety Evaluation

cc w/enclosures:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 29, 1989

Docket No. 50-410

Mr. Lawrence Burkhardt III
Executive Vice President, Nuclear Operations
Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

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Sincerely,

Robert Martin

Robert E. Martin, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 11 to NPF-69
2. Safety Evaluation

cc w/enclosures:
See next page

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 11
License No. NPF-69

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated December 15, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-69 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 11 are hereby incorporated into this license. Niagara Mohawk Power Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Capra

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 29, 1989

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 8-32	3/4 8-32
3/4 8-33	3/4 8-33

ELECTRICAL POWER SYSTEMS

ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

REACTOR PROTECTION SYSTEM ELECTRIC POWER MONITORING (RPS LOGIC)

LIMITING CONDITIONS FOR OPERATION

3.8.4.4 Two RPS UPS electrical protection assemblies for each inservice UPS set or alternate source shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one RPS electrical protection assembly for an inservice RPS UPS inoperable, restore the inoperable electrical protection assembly to OPERABLE status within 72 hours or remove the associated RPS UPS from service.

b. With both RPS electrical protection assemblies for an inservice RPS UPS inoperable, restore at least one electrical protection assembly to OPERABLE status within 30 minutes or remove the associated RPS UPS from service.

SURVEILLANCE REQUIREMENTS

4.8.4.4 The above specified RPS electrical protection assemblies instrumentation shall be determined OPERABLE:

a. By performance of a CHANNEL FUNCTIONAL TEST each time the plant is in COLD SHUTDOWN for a period of more than 24 hours, unless performed within the previous 6 months.

b. At least once per 18 months by demonstrating the OPERABILITY of overvoltage, undervoltage and underfrequency protective instrumentation by performance of a CHANNEL CALIBRATION including simulated automatic actuation of the protective relays, tripping logic and output circuit breakers and verifying the following setpoints.

   1. Overvoltage Bus A: $\leq$ 132 volts AC
      Bus B: $\leq$ 132 volts AC

   2. Undervoltage Bus A: $\geq$ 117.1 volts AC
      Bus B: $\geq$ 115.75 volts AC

   3. Underfrequency $\geq$ 57 Hz

REACTOR PROTECTION SYSTEM ELECTRIC POWER MONITORING (SCRAM SOLENOIDS)

LIMITING CONDITIONS FOR OPERATION

3.8.4.5 Two RPS electrical protection assemblies (EPAs) for each inservice RPS MG set or alternate source shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one RPS electrical protection assembly for an inservice RPS MG set or alternate power supply inoperable, restore the inoperable EPA to OPERABLE status within 72 hours or remove the associated RPS MG set or alternate power supply from service.

b. With both RPS electrical protection assemblies for an inservice RPS MG set or alternate power supply inoperable, restore at least one EPA to OPERABLE status within 30 minutes or remove the associated RPS MG set or alternate power supply from service.

SURVEILLANCE REQUIREMENTS

4.8.4.5 The above specified RPS electrical protection assemblies shall be determined OPERABLE:

a. By performance of a CHANNEL FUNCTIONAL TEST each time the plant is in COLD SHUTDOWN for a period of more than 24 hours, unless performed within the previous 6 months.

b. At least once per 18 months by demonstrating the OPERABILITY of overvoltage, undervoltage and underfrequency protective instrumentation by performance of a CHANNEL CALIBRATION including simulated automatic actuation of the protective relays, tripping logic and output circuit breakers and verifying the following setpoints.

1. Overvoltage Bus A: $\leq$ 128.8 volts AC
   Bus B: $\leq$ 130.0 volts AC

2. Undervoltage Bus A: $\geq$ 114.5 volts AC
   Bus B: $\geq$ 115.1 volts AC

3. Underfrequency $\geq$ 57 Hz

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NO. NPF-69

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-410

INTRODUCTION

By letter dated December 15, 1988, Niagara Mohawk Power Corporation (the licensee) has requested changes to Nine Mile Point Unit 2 Technical Specifications sections 4.8.4-4, Reactor Protection System Electric Power Monitoring (RPS Logic), and 4.8.4-5, Reactor Protection System Electric Power Monitoring (Scram Solenoids). These sections provide the surveillance requirements for performance of Channel Functional Tests on the Reactor Protection System Electrical Protection Assemblies. The changes requested by the licensee will require testing at each cold shutdown of greater than 24 hours if the channel functional tests have not been performed within the previous 6 months. This implies a maximum interval of 18 months between testing.

DISCUSSION

The current Nine Mile Point Unit 2 Technical Specifications require a channel functional test to be performed on the Electrical Protection Assemblies on the Reactor Protection System at least once per 6 months. Performance of these tests places the plant in a half scram condition. The loss of a single channel or component in that condition will cause a scram or an isolation. Therefore, this test configuration during operation increases the potential for a Main Steam Isolation Valve closure and/or a reactor scram.

The increase in inadvertent scrams causes an associated increase in shutdown system challenges which lead to increased plant safety risks. Additionally, the limitations and restrictions associated with a half-scram condition in the Reactor Protection System logic make testing during operation very difficult. As a result, the reactor is shut down prior to performing the test. By increasing the test interval the test could be performed during a refueling outage which reduces the potential for unnecessary challenges to the plant shutdown system. The analysis performed by the licensee in support of the Technical Specifications amendment request assumes testing is performed during power operation because the margin of safety provided by the Technical Specification is based on performing the test at power.

The methodology employed by the licensee to perform the analysis was approved by the Commission as documented in the July 15, 1987 letter "Safety Evaluation by the Office of Nuclear Reactor Regulation, Review of BWR Owners Group Reports NEDC-30844 and 30851P on Justification for and Extension of On-Line Test Intervals and Allowable Out-of-Service Times for BWR Reactor Protection Systems." The analysis provided by the licensee applies to an 18-month maximum interval between each Channel Functional Testing. This 18 month maximum interval is established by Surveillance Requirement 4.8.4.4 which requires a Channel Calibration at least once per 18 months. By definition (Technical Specification Section 1.4), the Channel Calibration includes the Channel Functional Test.

The BWR Owners Group Report NEDC 30851P addresses the frequency of the Reactor Protection System channel functional tests. This report demonstrated that a net improvement to plant safety can be realized with implementation of reduced frequency of RPS Channel Functional Tests. This change to reduced frequency has been incorporated in the Technical Specifications of several other BWR Operating plants.

The proposed amendment has no adverse effect on the ability of the reactor protection system and nuclear steam supply shutoff system to perform their intended safety functions. It also reduces the amount of time the plant is in half-a-scram condition and vulnerable to challenges to the plant shutdown systems. The staff has evaluated the analysis provided by the licensee and has concluded that the extension of the current 6-month test interval to a maximum of 18 months is justified as an overall net improvement to plant safety and is, therefore, acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment changes a surveillance requirement. The staff has determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

REFERENCE

1) "Safety Evaluation by the Office of Nuclear Reactor Regulation, Review of BWR Owners Group Reports NEDC-30844 and 30851P on Justification for and Extension of on-line Test Intervals and Allowable Out-of-Service Times for BWR Reactor Protection Systems," forwarded to BWROG Chairman T. A. Pickens on July 15, 1987.

Dated: November 29, 1989

PRINCIPAL CONTRIBUTORS:

N. Trehan